



NuApps-POE User's Manual

Foreword

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REVISION HISTORY

Date	USM Version	History
Oct. 07, 2008	v1.0	
2010/11/11	v1.1	<ol style="list-style-type: none">1. Changing Foreword on page 22. Changing Table of Contents on page 43. Adding page number4. Adding "Draft" watermark5. Adding document footnote on page 43

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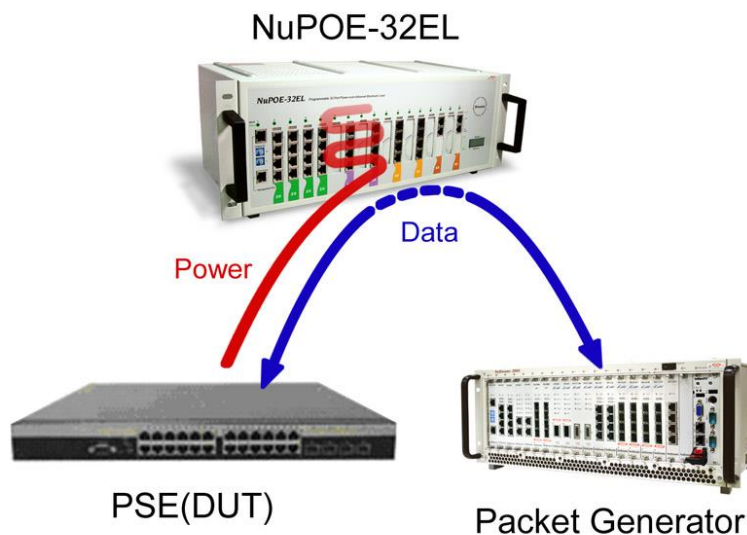
1. Introduction

1.1 NuApps-POE

NuApps-POE provides a detailed and powerful virtual panel to manage Power over Ethernet (PoE) NuPOE-32EL chassis to test and monitor powered devices (PD). It offers a flexible interface to control NuPOE-32EL in a single or multiple chassis.

NuApps-POE is designed to allow users to perform PoE tests along with power sourcing equipment (PSE). It provides the capability to pass cabling traffic at the same time as delivering data for analysis and reports.

1.2 Application Diagram

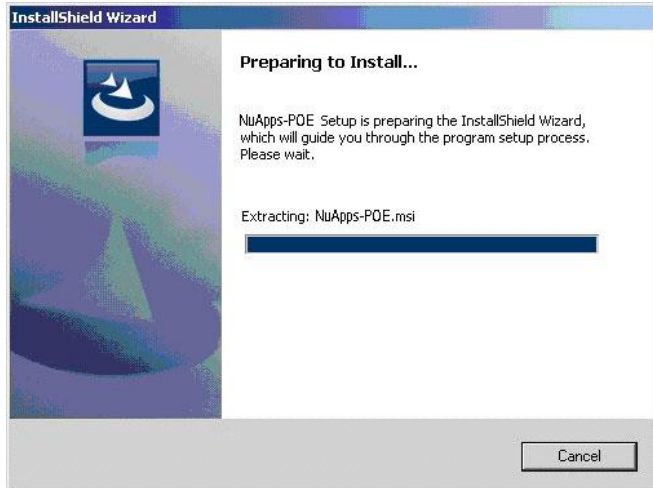




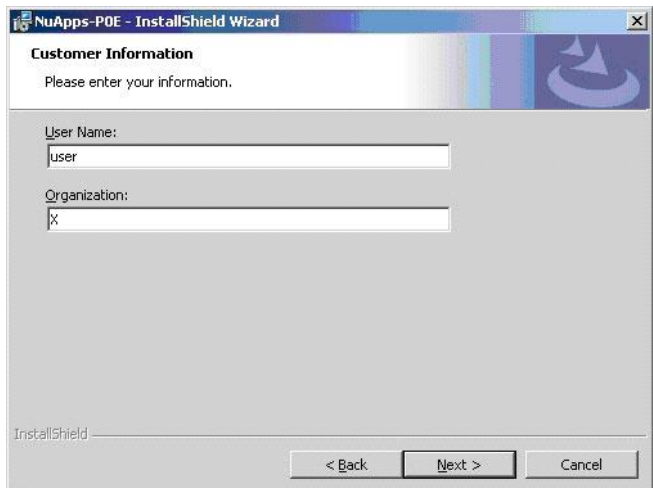
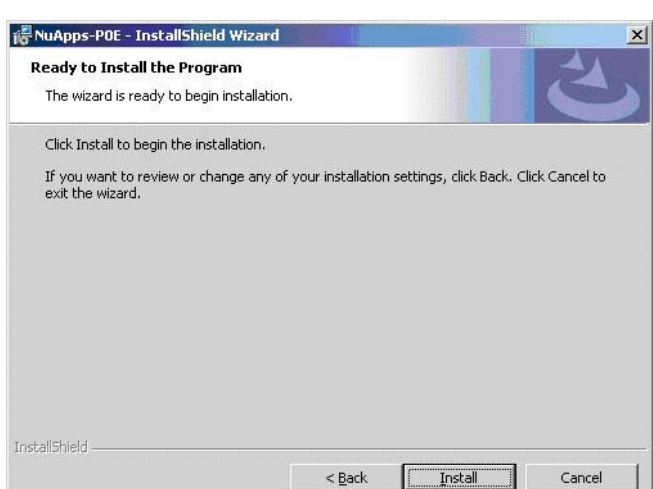
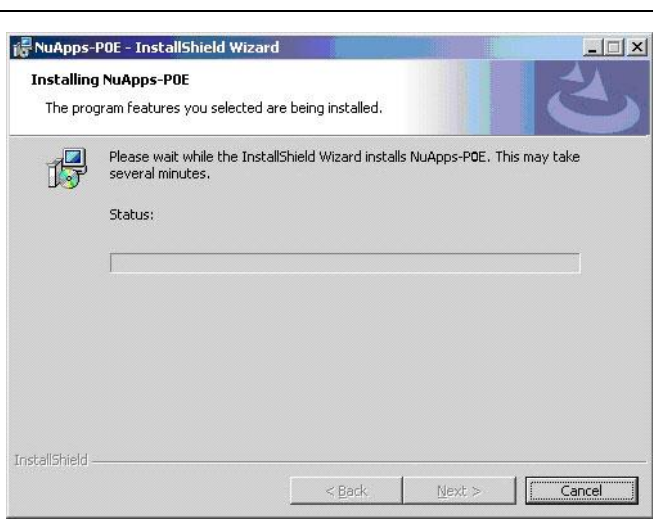
Connect PSE port(s) and PD / Switch port(s) of NuPOE-32EL to the DUT. User can use the NuApps-POE to control and analyze data via the connection between the Management port of NuPOE-32EL and the PC with NuApps-POE.

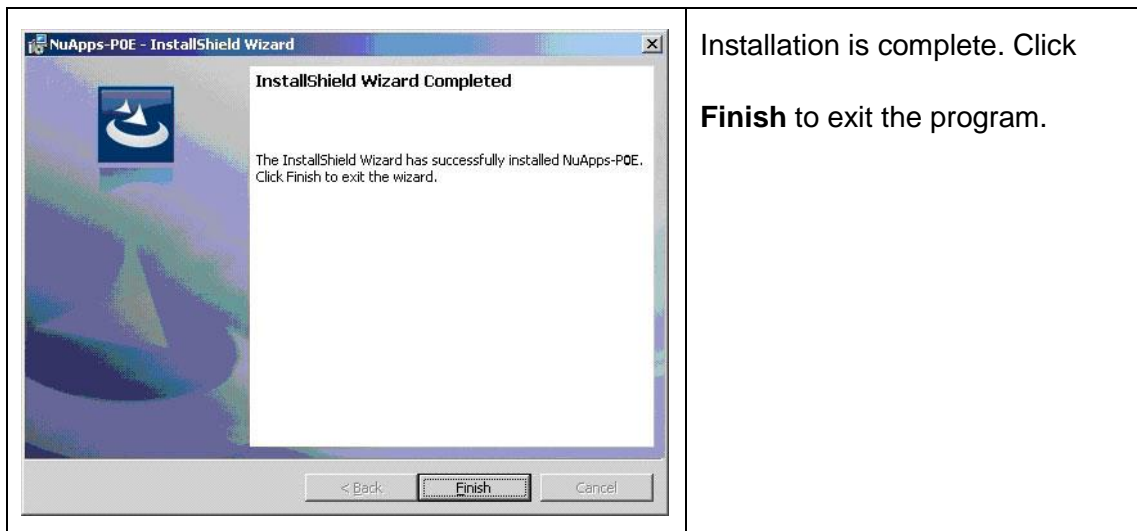
2. Installation and Uninstallation


2.1 Installation

Double click on the icon of NuApps-POE setup.exe to activate NuApps-POE setup.

	<p>The setup is preparing process.</p> <p>Click Cancel to cancel at any time and exit the process.</p>
	<p>Click Next to continue the installation.</p>
	<p>Read License Agreement carefully and click the radio button to accept the terms. Click Next to for next step. Click Back to review any installation settings.</p>

 <p>The screenshot shows the 'Customer Information' screen of the NuApps-PDE InstallShield Wizard. It prompts the user to enter their information. The 'User Name' field contains 'user' and the 'Organization' field contains 'X'. At the bottom, there are buttons for '< Back', 'Next >', and 'Cancel'.</p>	<p>Input information of user name and organization, and then click Next for next step.</p>
 <p>The screenshot shows the 'Ready to Install the Program' screen. It states 'The wizard is ready to begin installation.' and 'Click Install to begin the installation.' It also provides instructions: 'If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.' The 'Install' button is highlighted. At the bottom, there are buttons for '< Back', 'Install', and 'Cancel'.</p>	<p>Click Install to start installing the program.</p>
 <p>The screenshot shows the 'Installing NuApps-PDE' screen. It states 'The program features you selected are being installed.' and 'Please wait while the InstallShield Wizard installs NuApps-PDE. This may take several minutes.' There is a 'Status:' label followed by a progress bar. At the bottom, there are buttons for '< Back', 'Next >', and 'Cancel'.</p>	<p>The installation is in process.</p>



The installation of NuApps-POE is successful. Now the icon  appears on the desktop.

2.2 Uninstallation

If applications do not work properly or Xtramus may periodically update new version of NuApps-POE software, it is necessary to uninstall previous NuApps-POE first.

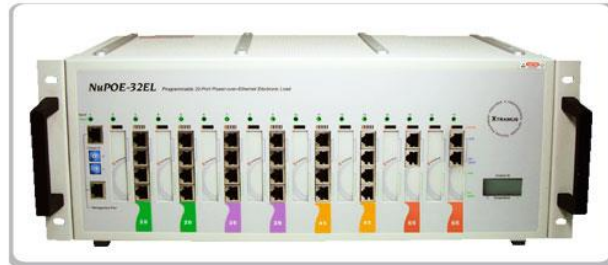
There are 2 places to uninstall the program:

1. Go to **Start** menu > **Programs** > **NuStreams** > **NuApps-POE** > **Uninstall**.
2. Or **Control** panel > **Add/Remove Programs** > **NuApps-POE** >

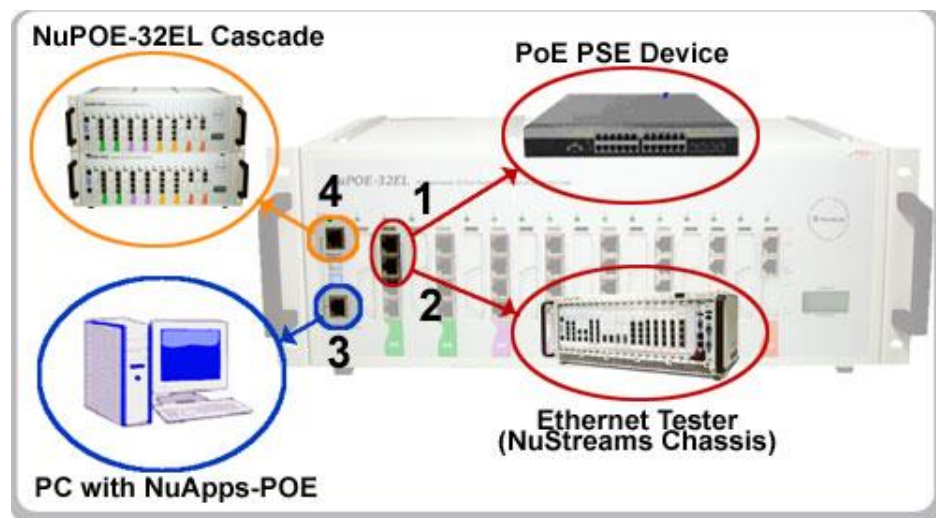
Change/Remove.

3. NuPOE-32EL Setting

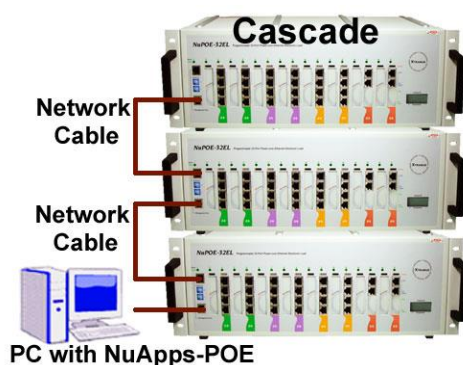
Before NuApps-POE start, user must set the connection of NuPOE-32EL with PoE PSE device.



The setup diagram as below:



- 1) User can connect NuPOE-32EL to PoE PSE device via Port 1 and Port 3 on the every module slot
- 2) User can connect NuPOE-32EL to Ethernet tester via Port 2 and Port 4 on the every module slot.
- 3) The port 2 on the first slot, on the left side of NuPOE-32EL, is the exclusive port of the connection between the NuPOE-32EL and PC with NuApps-POE.
- 4) The function of Port 1 and Port 2 on the first slot is for the cascade.

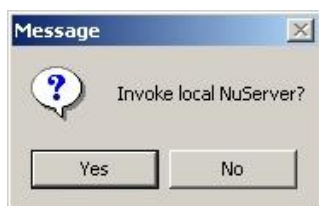


4. Quick Start

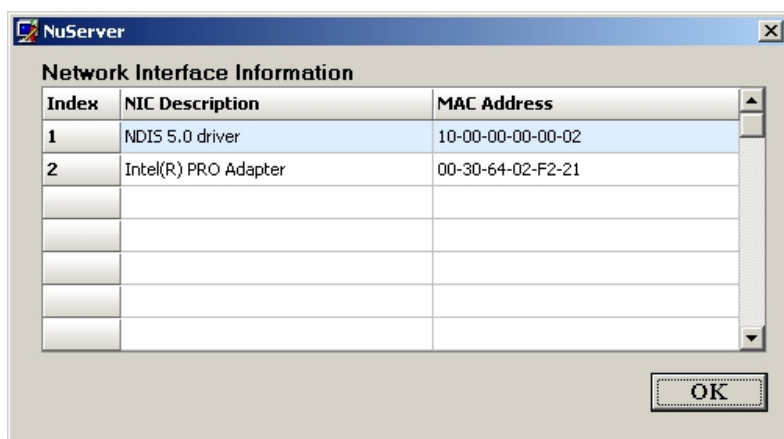


Double click on the NuApps-POE icon **NuApps-POE** on the desktop to start

NuApps-POE program. A message window appears to inquire about invoking the local server if it is connected to one.

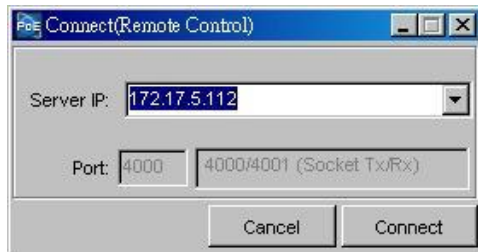


Click **Yes** button and the **NuServer** window will appear.

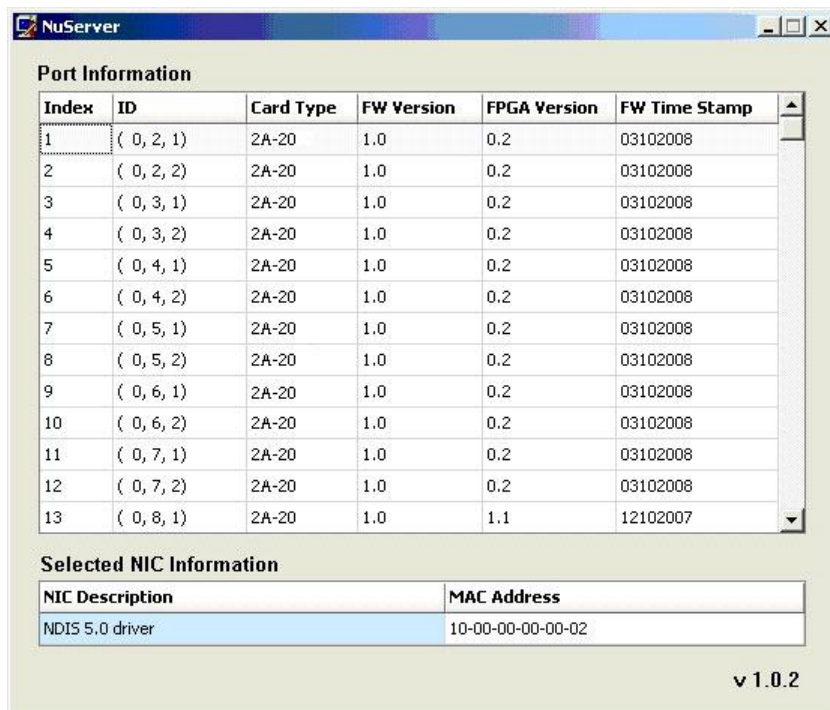


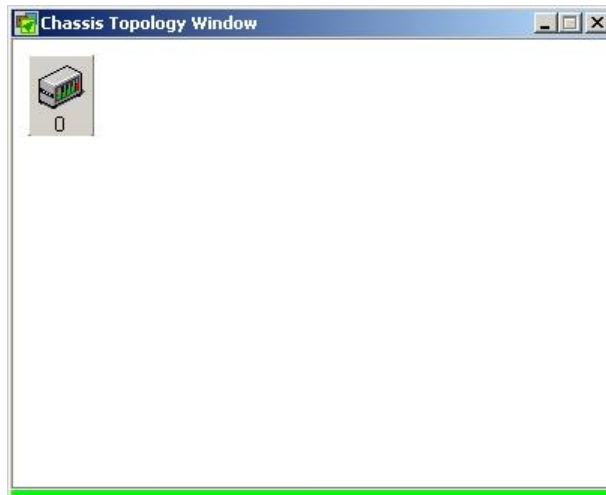
Choose the NIC to which NuPOE-32EL is connected. Then click **OK** button to activate NuServer.

Click **No** button, the **Connect** window will appear to input server IP if NuPOE-32EL is connected to a remote server. Click **Connect** button.

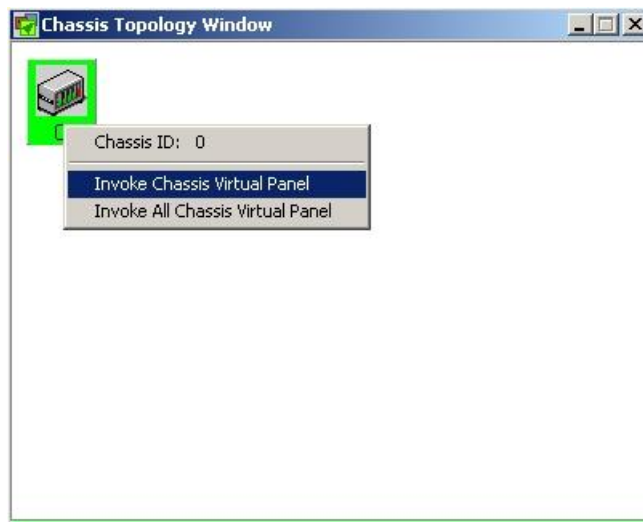


NuServer has been activated.

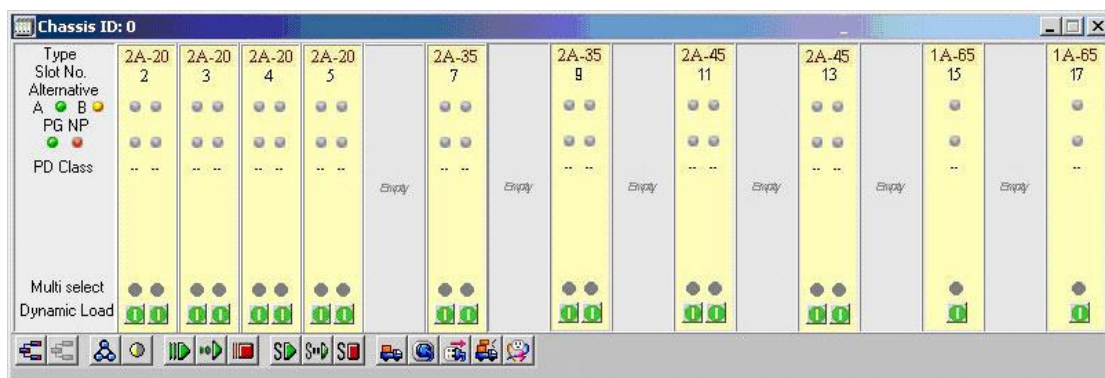




Chassis topology window appears to display the chassis ID connected.



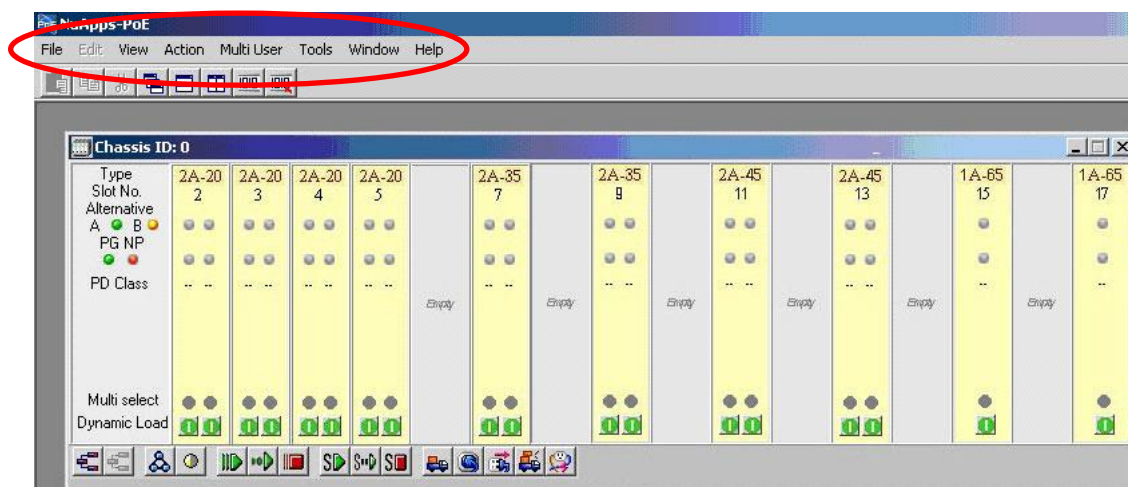
Click right mouse on the ID to bring out the popup menu and invoke the chassis virtual panel.



The virtual panel of NuApps-POE program appears.

5. Function Description

5.1 Main Window



The top level menus of NuApps-POE include: **File** Menu, **Edit** Menu, **View** Menu, **Action** Menu, **Multi User** Menu, **Tools** Menu, **Window** Menu and **Help** Menu.

➤ The choices for **File** Menu are described in the table below:

Menu Choice	Shortcut	Usage
Load	Ctrl+ L	Presents a dialogue to load workspace from the disk.
Save		Saves the current information to the current workspace in use.
Save As	Ctrl+ A	Presents a dialogue to save the current workspace to the disk.
Exit	Ctrl+ E	Exits NuApps-PoE program.

➤ **View** Menu is divided into **Control** Menu and **Report** Menu.

■ The choices for **Control** Menu are described in the table below:

Menu Choice	Shortcut	Usage
Chassis Topology Window	Ctrl+ T	Invokes Chassis Topology window.
All Chassis Panel	Ctrl+ Alt+ V	Invokes all chassis panel.
Show Server		Invokes NuServer window when visible at

		the task management but invisible at the taskbar.
--	--	---

- The choices for **Report** Menu are described in the table below:

Menu Choice	Shortcut	Usage
Counter Window	Ctrl+ W	Invokes Counter window.
Log Window	Ctrl+ O	Invokes Log window.

- The choices for **Action** Menu are described in the table below:

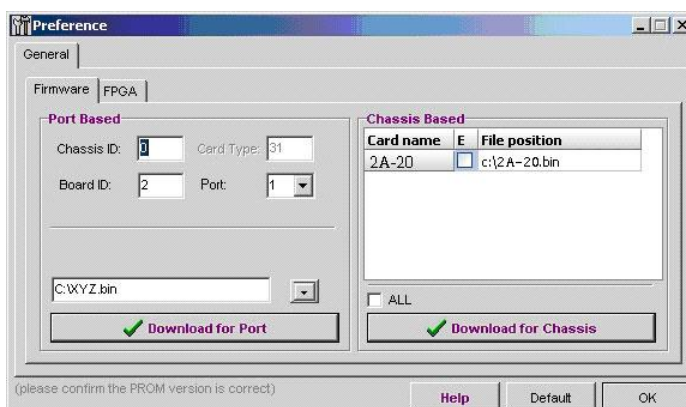
Menu Choice	Shortcut	Usage
Connect		Invokes to connect to a local server when it's enabled.

- The choices for **Multi User** Menu are described in the table below:

Menu Choice	Shortcut	Usage
Release My Ownership		Releases the current chassis.
Release All Ownership		Releases all chassis.
Reserve All Chassis		Reserves all chassis.

- The choices for **Tools** Menu are described in the table below:

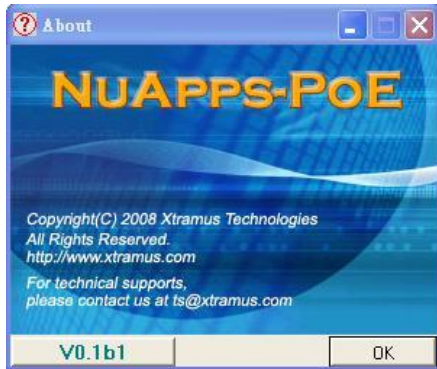
Menu Choice	Shortcut	Usage
Option	Ctrl+ P	Invokes Preference window.



- The choices for **Window** Menu are described in the table below:









Menu Choice	Shortcut	Usage
Cascade	Ctrl+ S	Arranges all windows in cascade.
Tile Horizontally	Ctrl+ H	Arranges all windows horizontally.
Tile Vertically		Arranges all windows vertically.
Minimize All	Ctrl+ I	Minimizes all windows.

- The choices for **Help** Menu are described in the table below:

Menu Choice	Shortcut	Usage
Xtramus Web	F3	Links to the official website of Xtramus Technologies
About	Ctrl+ B	Provides information regarding the current version of NuApps-PoE. 

5.2 Toolbar Function

The buttons in the main window toolbar are described in the table below:

Figure	Usage
	Makes a paste.
	Makes a copy.
	Makes a cut.
	Arranges all windows in cascade.
	Arranges all windows horizontally.
	Arranges all windows vertically.
	Views Counter window.
	Views multi selected counters in Counter window.



5.3 Chassis Panel

5.3.1 Toolbar Function

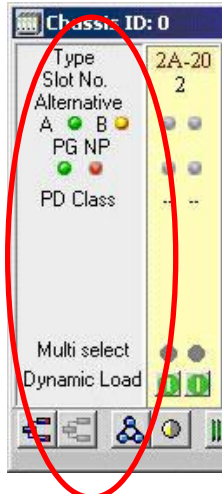


The buttons in the chassis panel tool bar are described in the table below:





Figure	Usage
	Reverses all boards.
	Releases all boards.
	Invokes browse setup.
	Multi select toggle.
	Starts test (all and concurrent).
	Starts testing (all and sequence).
	Stops dynamics loading (all).
	Starts test (selected ports and Concurrent).
	Starts test (selected ports and Sequence).
	Stops dynamic loading (selected ports).
	Invokes dynamic loading.
	Invokes connect test.
	Invokes disconnect test.

	Invokes overload test.
	Invokes short-circuit test.

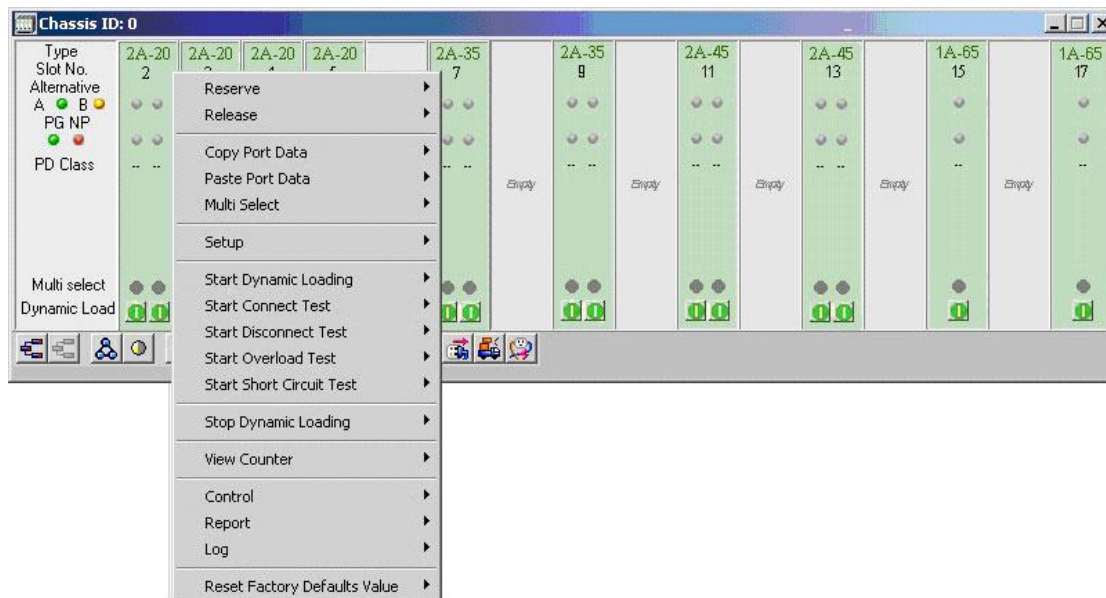
5.3.2 LED Indicators



LED Indicators in the chassis panel are described in the table below:

Item	Symbol/Color	Description
Type	N/A	Card Type.
Slot No.	N/A	Slot Number.
Alternative A  B 	Green	Alternative A: sends power via pin 1, 2, 3 and 6.
	Orange	Alternative B: sends power via pin 4, 5, 7 and 8.
PG NP  	Green	Power status of the port is good. (Power Good)
	Red	Power status of the port is not active. (No Power)
PD Class	N/A	PD class level 0 ~ 4.
Multi select	Green	Port selected.
	Gray	Port unselected.
Dynamic Load	Green	Stops dynamic loading
	Red	Invokes dynamic loading


5.4 Popup Menu

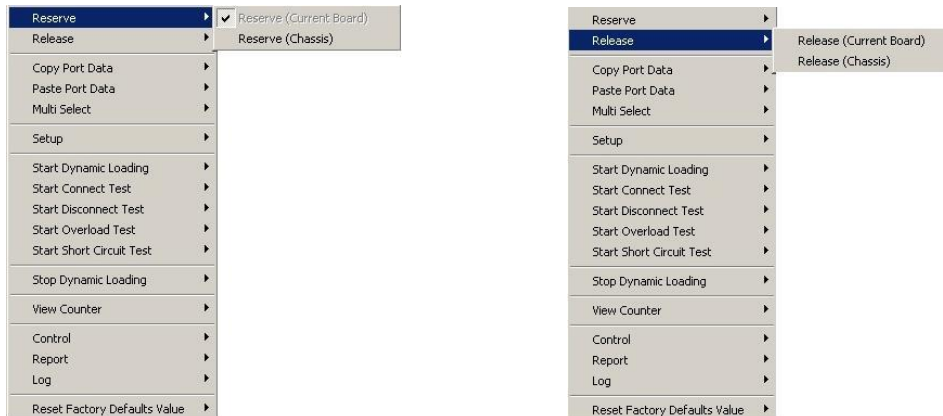


Move the cursor to any of the module cards on the chassis panel and right mouse click to bring out the popup menu of the current port.


6. Operation

6.1 Reserve and Release

Before making any testing configurations, click on **Reserve (Chassis)** or  to reserve the entire chassis of individual module cards.



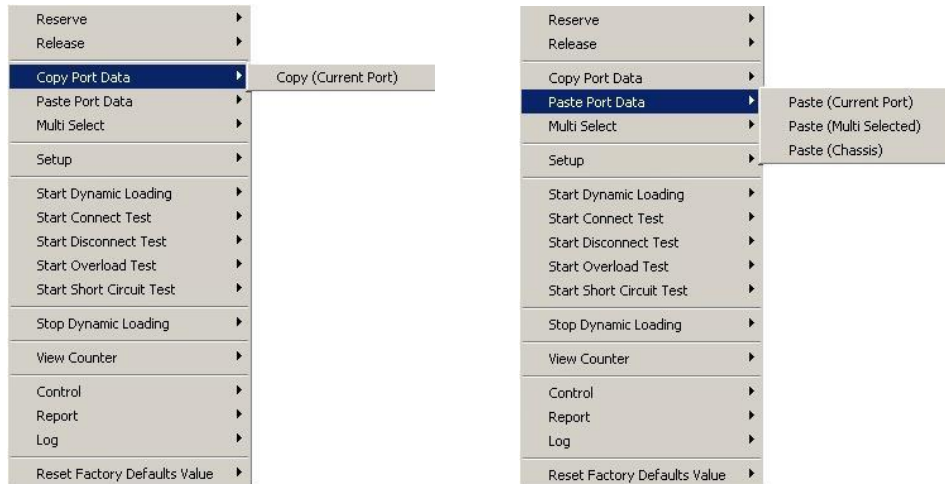
If the chassis is shared by multiple users, bring out the popup menu and choose **Reserve (Current Board)** to reserve the card for own use.

To disable the reserve function, click on the **Release (Current Board)/ Release (Chassis)** or . The reserved ports will be released.



The Message bar indicates the processing status of reserve chassis. It is the same with releasing chassis.

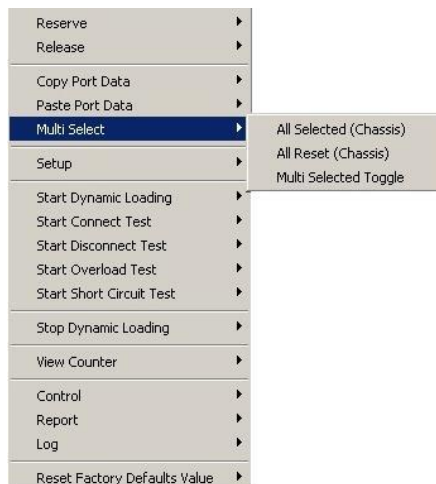
6.2 Copy and Paste Port Data



Copy the testing setup of the current port. Make further configurations by copying the settings of the current port.

Then paste the copied port data to the current port or multiple ports through the chassis window.

6.3 Multi Select




Choose **All Selected (Chassis)** to select all ports in the chassis for testing configuration.

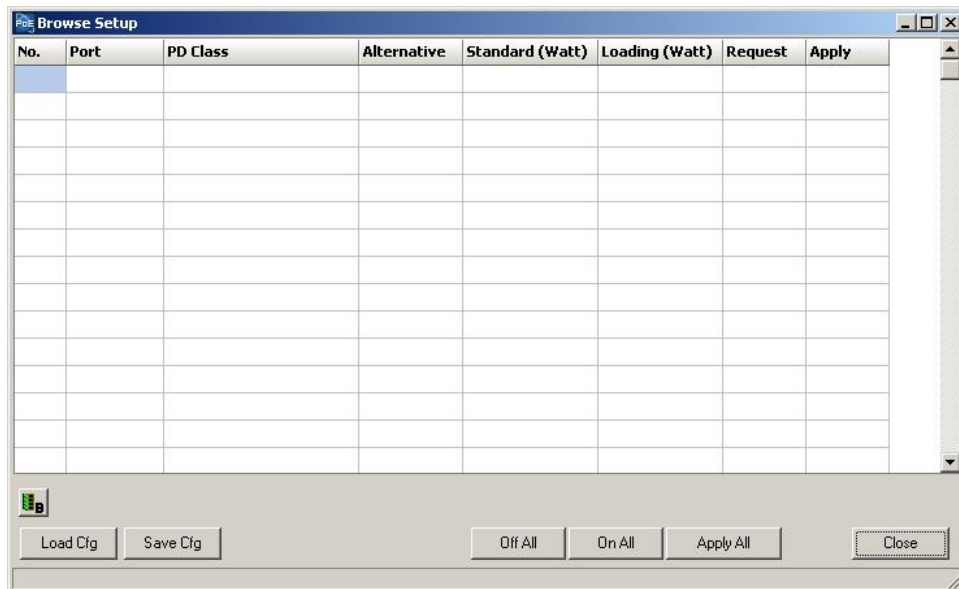
Choose **All Reset (Chassis)** to reset all ports in the chassis.


Choose **Multi Selected Toggle** to toggle between the set ports and the reset ones.

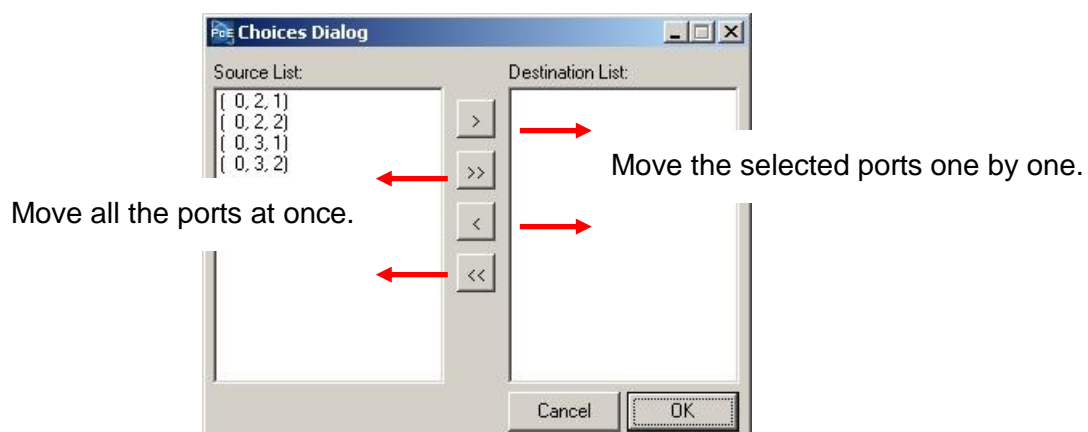
6.4 Setup

6.4.1 Browse Setup

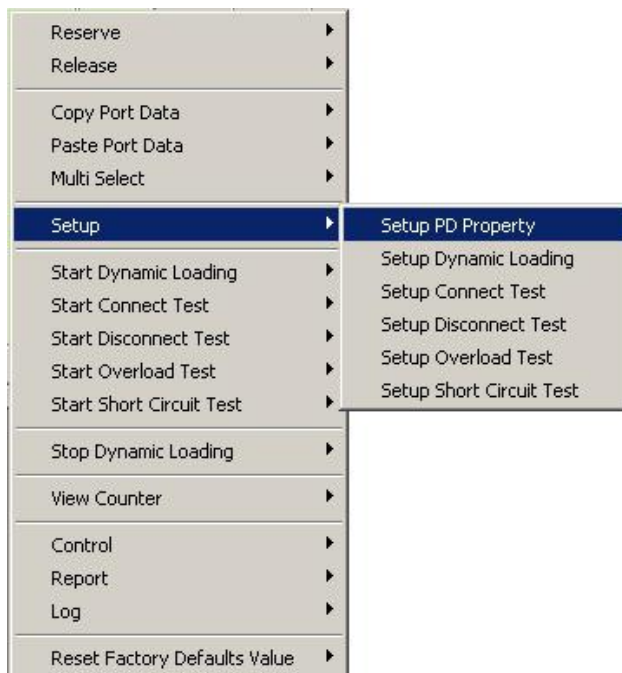
Press  button from bottom toolbar of the chassis panel to bring up the Browse Setup window.



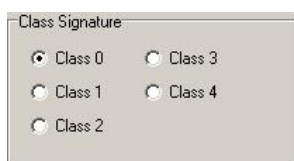
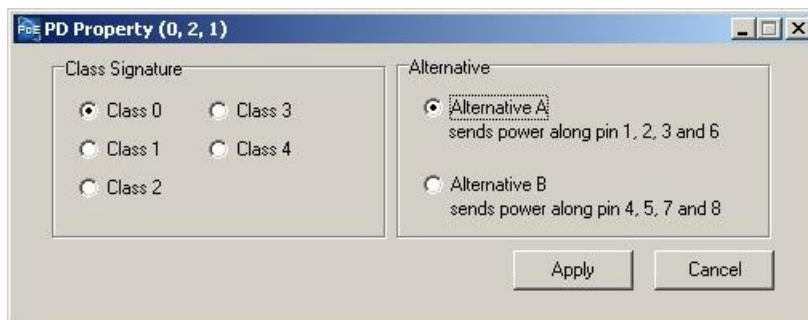
Press  to bring out the port selection dialogue. Use the arrow key(s) to select the port(s). Click **OK** button after completion to close the dialogue.



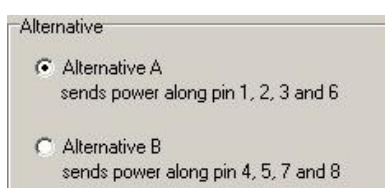
6.4.2 Setup PD Property



The dialogue window appears.

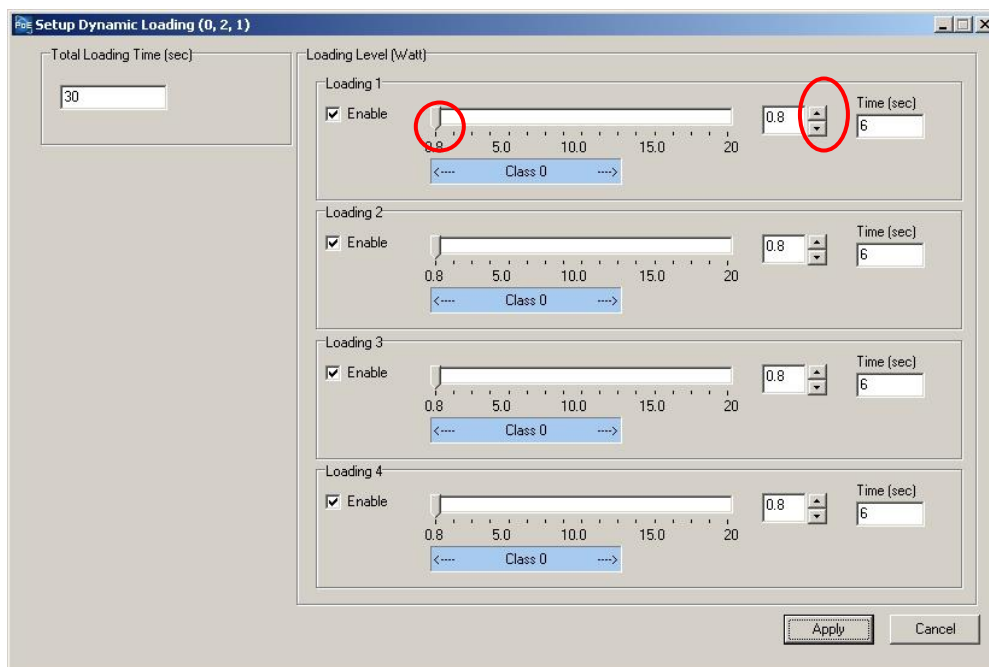
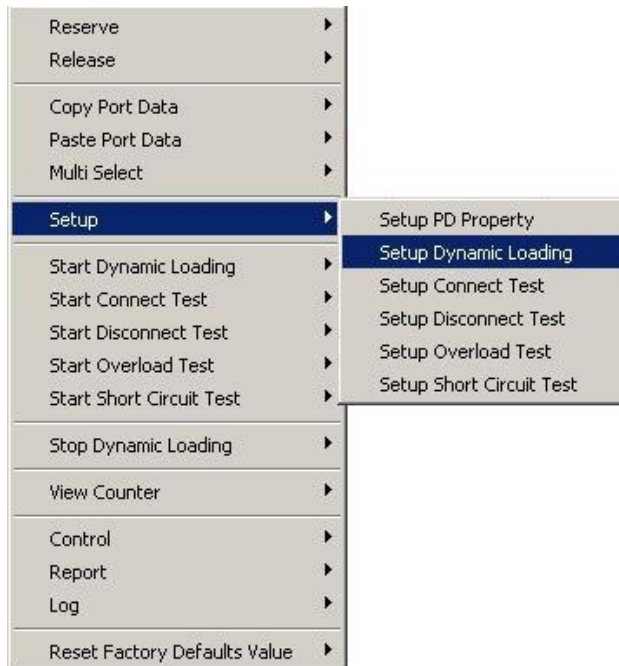


Five PD (powered devices) classes of power level are supported. Click the radio button to select the class signature.



Both alternative wirings are supported. Alternative A refers to send power along with pin 1, 2, 3 and 6 while alternative B refers to send power along with pin 4, 5, 7 and 8.

6.4.3 Setup Dynamic Loading



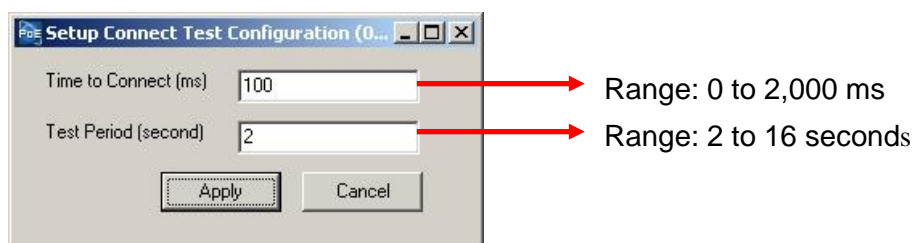
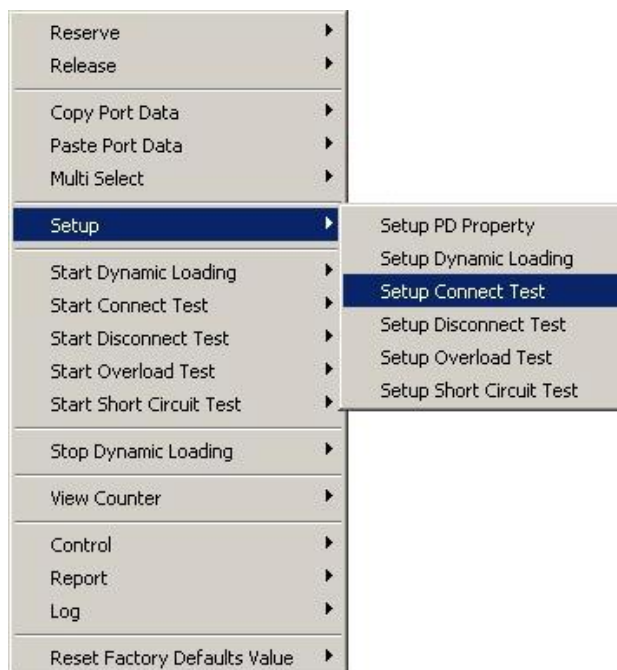
There are four (4) loading levels available. Check the **Enable** box(es) and mark the power value on the ruler or use the up or down arrow keys to determine the

designated power value and the duration for the loading level. The time (sec) for each loading has to be greater than 2 seconds. The loading operates in Constant Power (CP) mode and displays in scales from 0.8 to 20 Watt. The capacity could support up to 15.4 Watt per port continuously and 19 Watt for short-term overload tests.

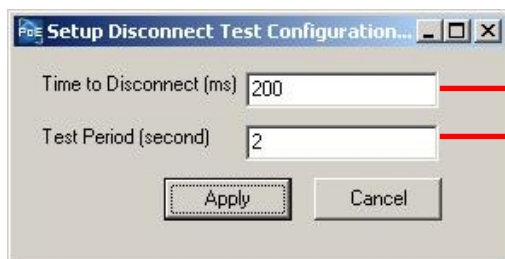
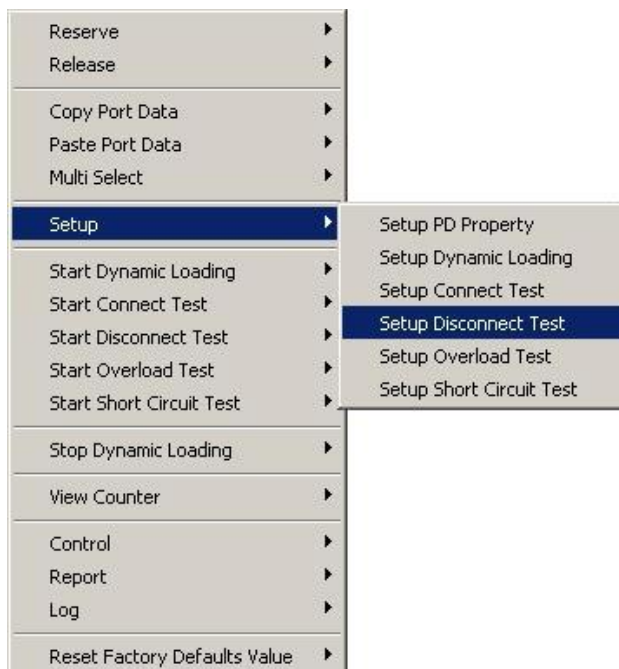
Input the total loading duration in seconds. The time for total loading period has to be greater than 2 seconds.

Click **Apply** button after all setups.

6.4.4 Setup Connect Test



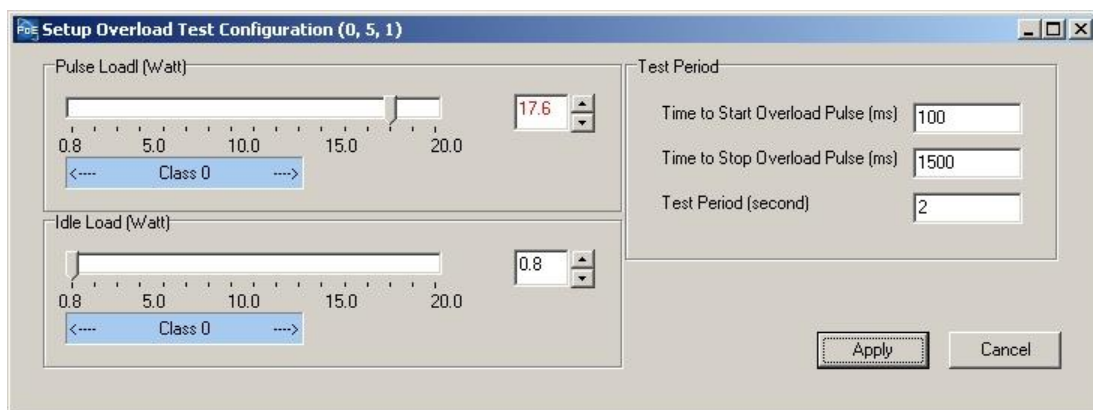
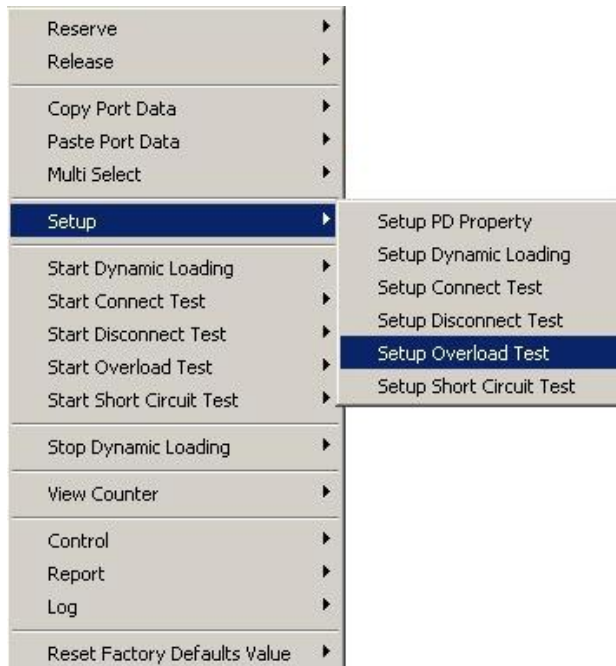
6.4.5 Setup Disconnect Test



Range: 0 to 2,000 ms

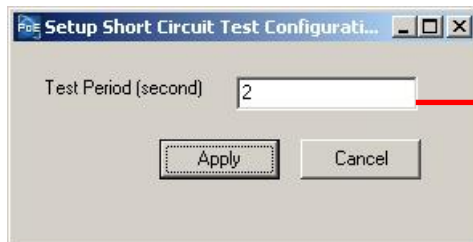
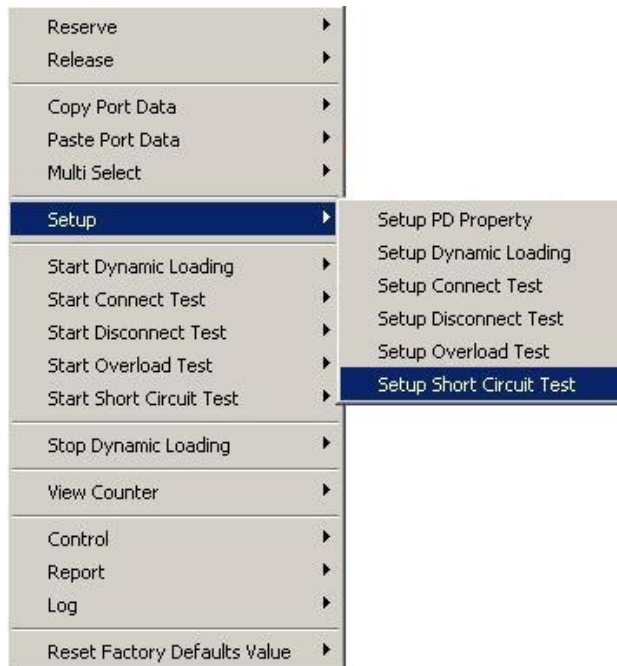
Range: 2 to 16 seconds

6.4.6 Setup Overload Test



Set up the pulse load and the idle load for overload configuration. Pulse load refers to the maximum value once the power shoots up while idle load refers to the lowest value when loading drops off.

6.4.7 Setup Short Circuit Test

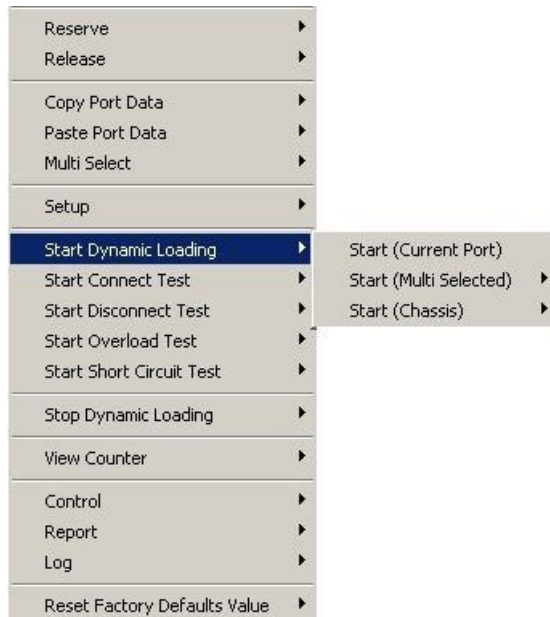



Range: 2 to 16 seconds

6.5 Start Test

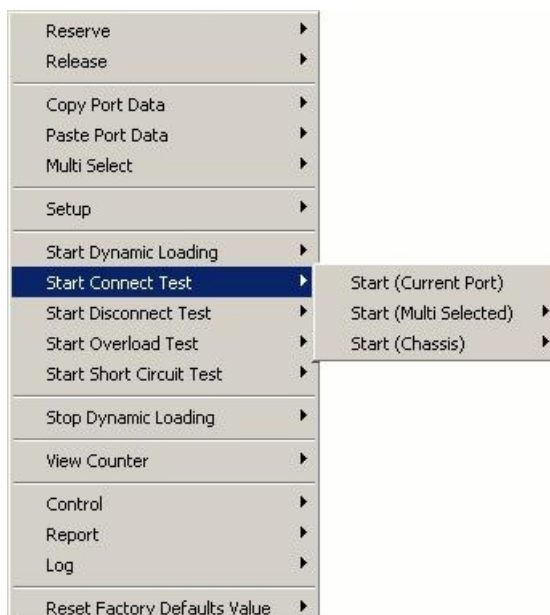
There are two places to start any test: choose from the popup menu or click the small figure from the bottom of the chassis panel.

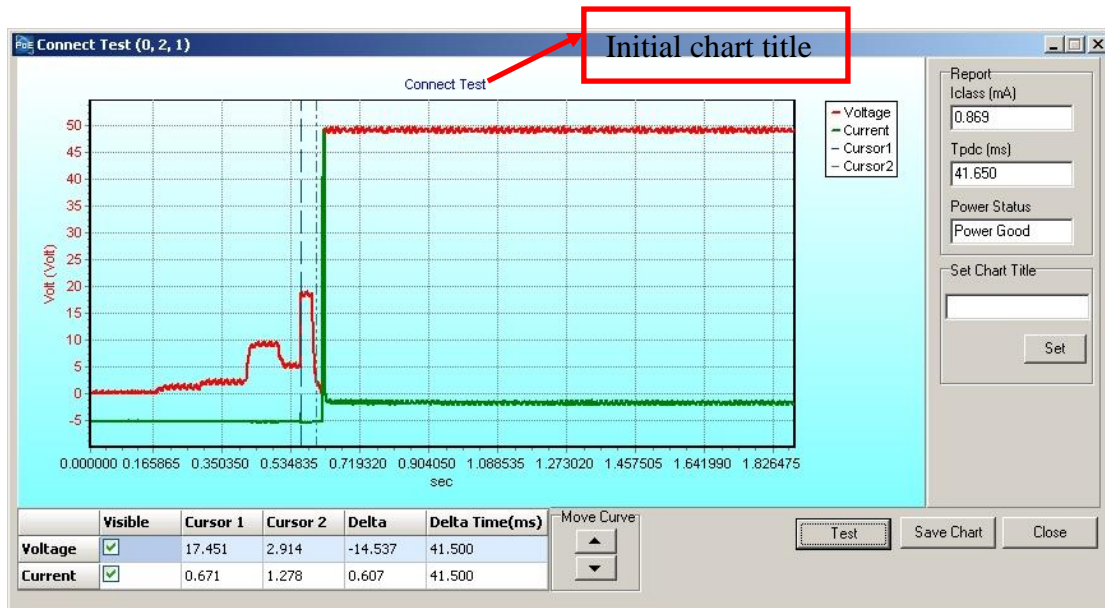
6.5.1 Start Dynamic Loading



The indicator  for the dynamic loading from the virtual panel will appear to indicate the port(s) is/are running dynamic loading test.

6.5.2 Start Connect Test





Check the **Visible** box for the power measurements of Voltage and/or Current to show the information in chart.

Cursor 1- Refers to the value at the Cursor 1 position. Click on any point on chart with the mouse and **Shift** button at the same time to move the cursor and to change the value.

Cursor 2- Refers to the value at the Cursor 2 position. Click on any point on chart with the mouse and **Ctrl** button at the same time to move the cursor and to change the value.

Delta- Refers to the difference of the values between Cursor 1 and Cursor 2.

Delta Time (ms)- Refers to the time difference between Cursor 1 and Cursor 2.

On the right side of the chart, Report shows different power measurements of the results for different tests.

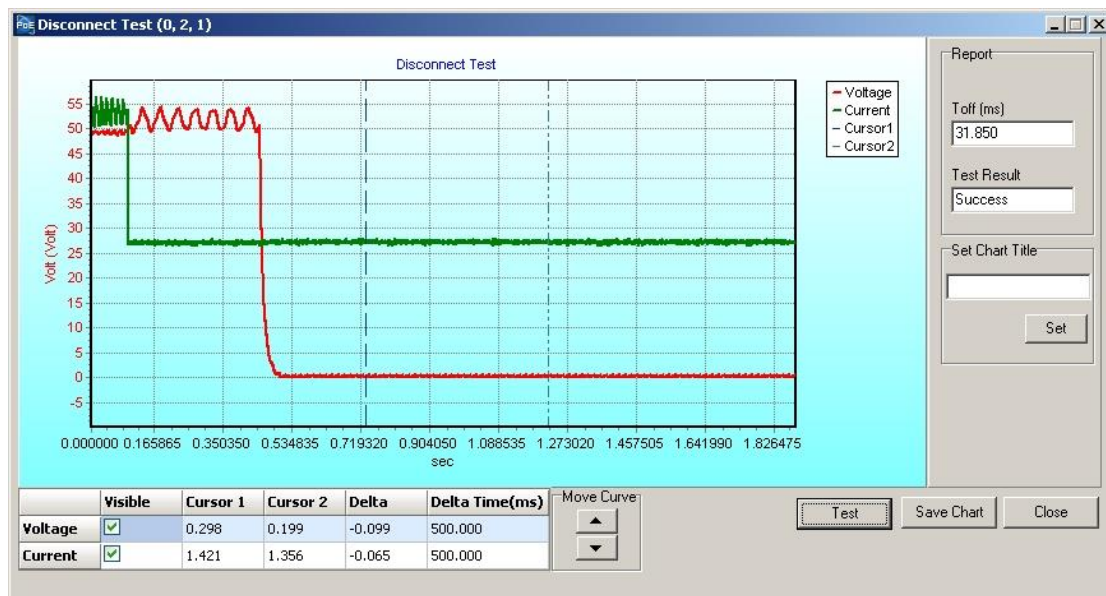
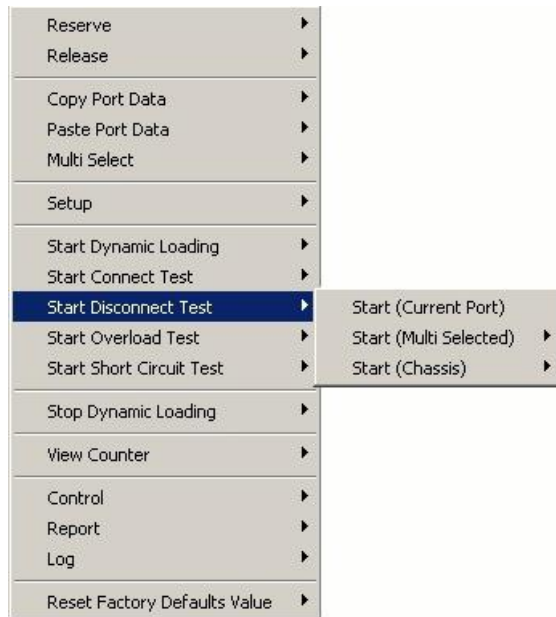
For Connect Test, there are Iclass (mA), T pdc (ms) and Power Status (Power Good/No Power).

To title the chart, input a title in a pane under Set Chart Title, then press **Set** button to

put the title in chart.

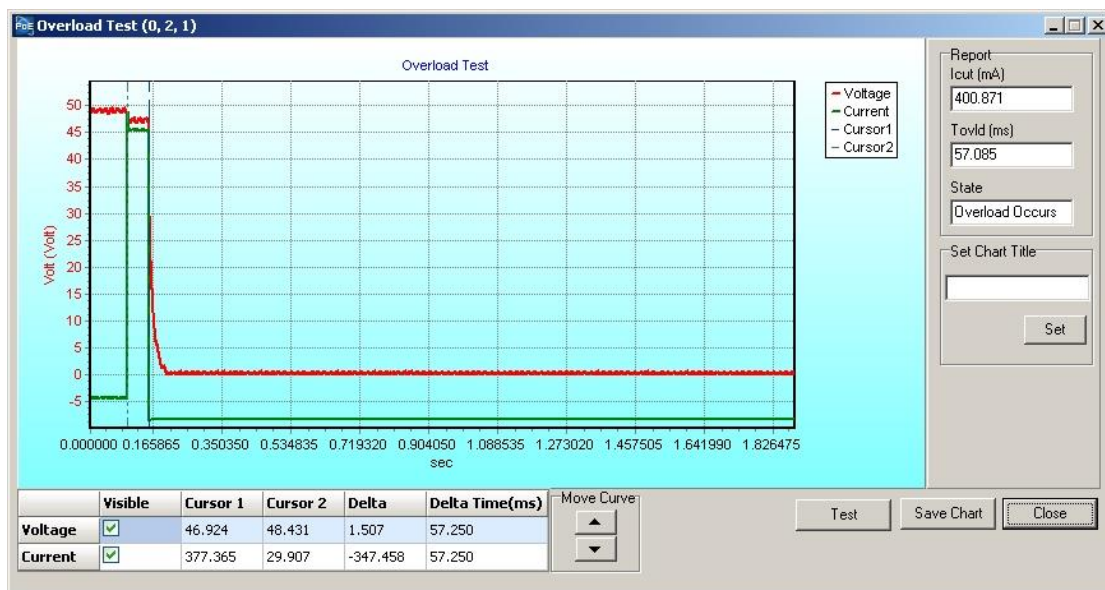
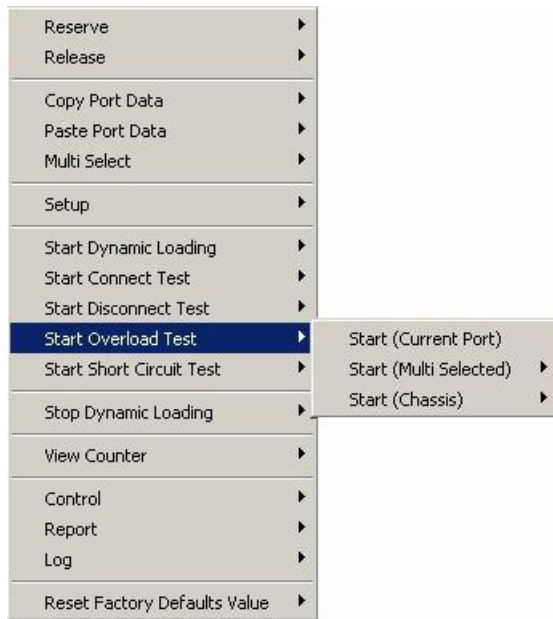
Re-start the test by clicking the **Test** button; save the current chart by clicking the **Save Chart** button; exit the chart by clicking the **Close** button.

6.5.3 Start Disconnect Test



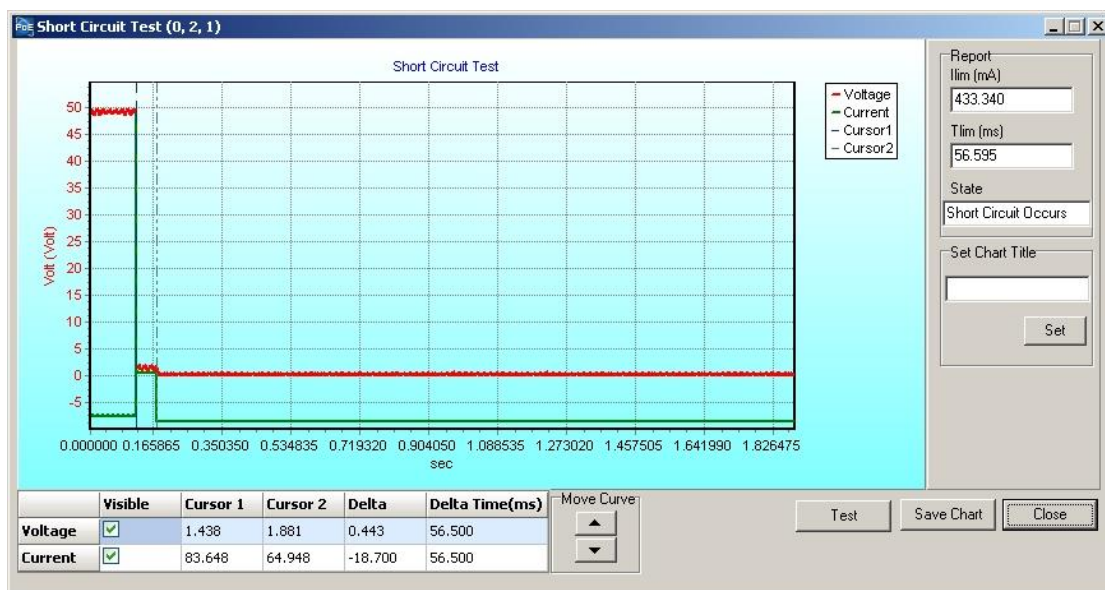
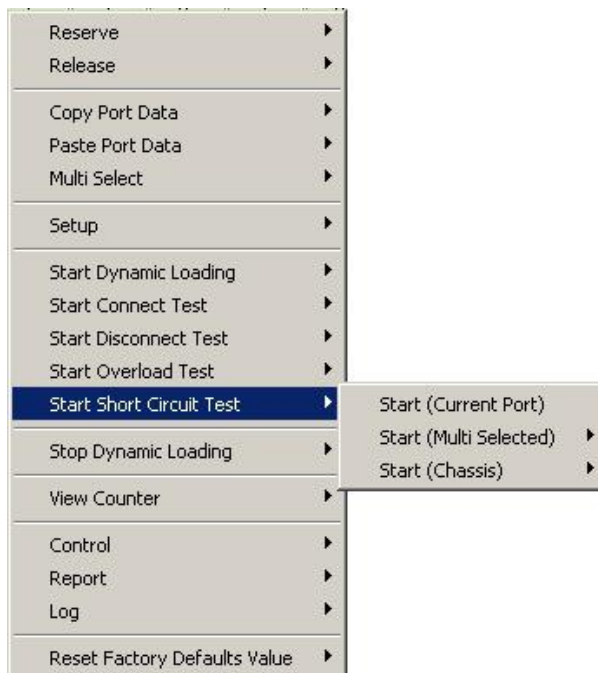
For Disconnect Test, the report shows T off (ms) and Test Result (Success/Fail).

6.5.4 Start Overload Test



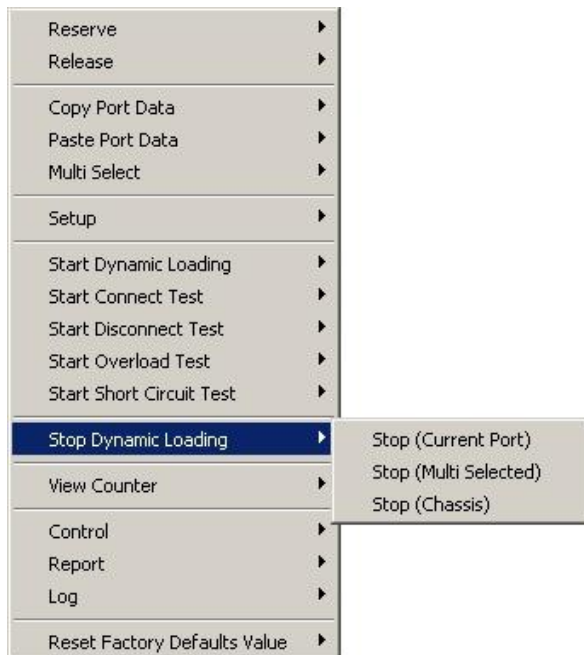
For Overload Test, the report shows Icut (mA), T ovlid (ms) and State (Overload Occurs/No Overload).

6.5.5 Start Short Circuit Test



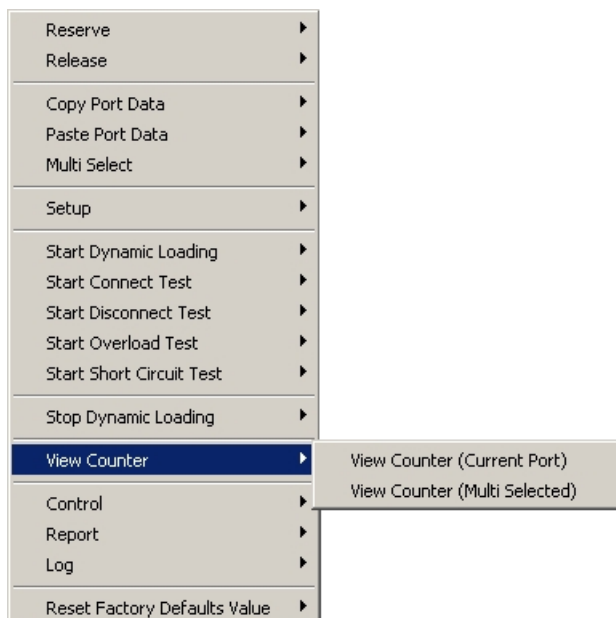
For Short Circuit Test, the report shows Ilim (mA), Tlim (ms) and State (Short Circuit Occurs/No Short Circuit).

6.6 Stop Dynamic Loading



Since dynamic loading is a constant activity, click right mouse on the module card to bring out the popup menu and press **Stop Dynamic Loading** to stop.







6.7 View Counter



For any types of loading or dynamic loading, view counter window for result analysis.

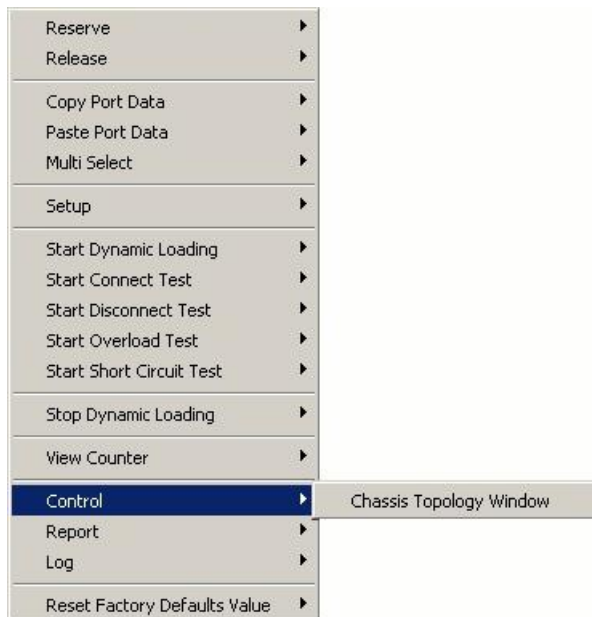
Counter Window					
(Chassis,Slot,Port)	{ 0, 2, 1}	{ 0, 2, 2}	{ 0, 3, 1}	{ 0, 3, 2}	Total: 4 ports
Watt	2A-20	2A-20	2A-20	2A-20	-----
PD Class	2	1	0	1	-----
Alternative	A	A	A	A	-----
Conductor	MDI	MDI	MDI	MDI	-----
Power Status	NP	PG	PG	PG	-----
RMS Voltage (V)	1.727	46.630	46.680	0.177	-----
RMS Current (mA)	1.744	109.966	117.825	1.543	-----
Power (Watt)	0.003	5.128	5.500	0.000	10.631
Max Power (Watt)	4.647	5.129	5.502	0.730	5.502
Min Power (Watt)	0.000	0.296	0.869	0.000	0.000
Max Peak Voltage (V)	48.173	-47.059	47.202	0.374	48.173
Max Peak Current (mA)	157.861	110.689	118.749	113.612	157.861
Min Peak Voltage (V)	-53.070	-47.568	-47.495	-47.365	-53.070
Min Peak Current (mA)	-2.325	9.726	30.622	-1.916	-2.325
Temperature (Centigrade)	41.000	51.000	65.000	68.000	-----
Power Failure Event	0	0	0	0	0

Toolbar

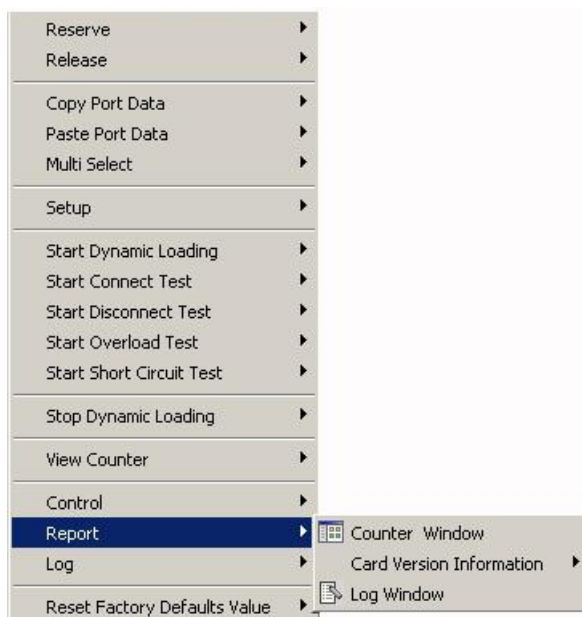
Figure	Usage
	Exports the current counter window to an Excel file.
	Prints out the information of the counter window via printer.
	Invokes port mapping.
	Resets port mapping.
	Clears selected counter.
	Adjusts column height.

6.8 Control

It is also available to invoke Chassis Topology Window here to check chassis ID.



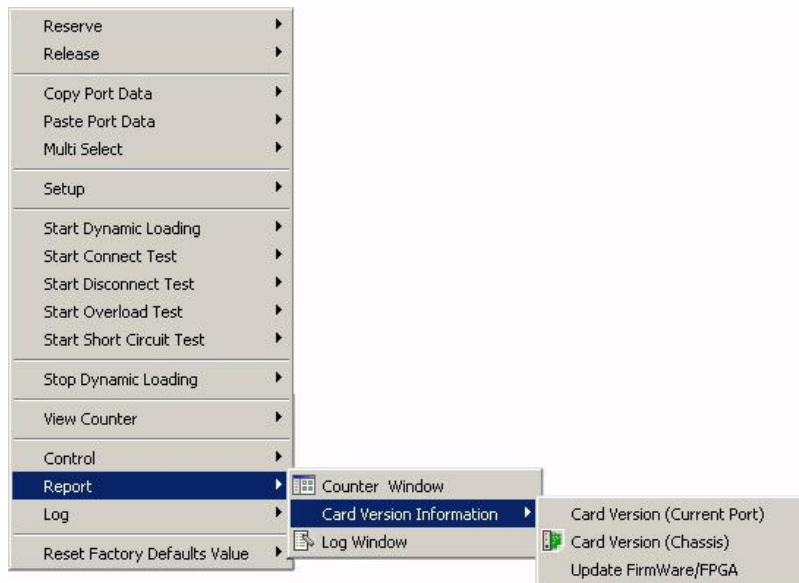
6.9 Report



6.9.1 Counter Window

It is also available to invoke Counter Window here.

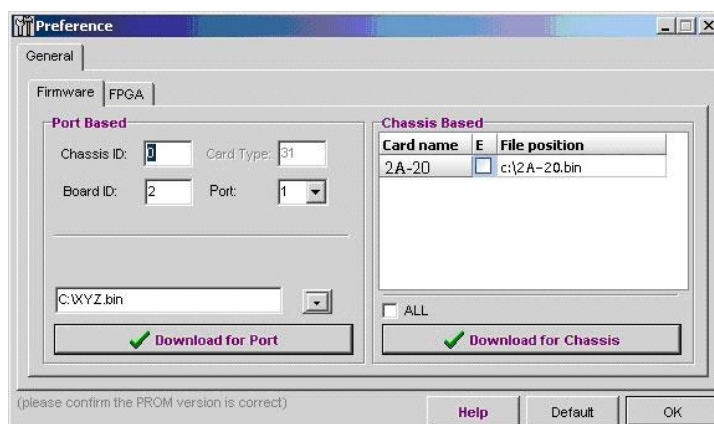
6.9.2 Card Version Information



Check **Report> Card Version Information> Card version** to bring out the FPGA version of the port. Click **OK** button to exit the dialogue.



Update Firmware/FPGA



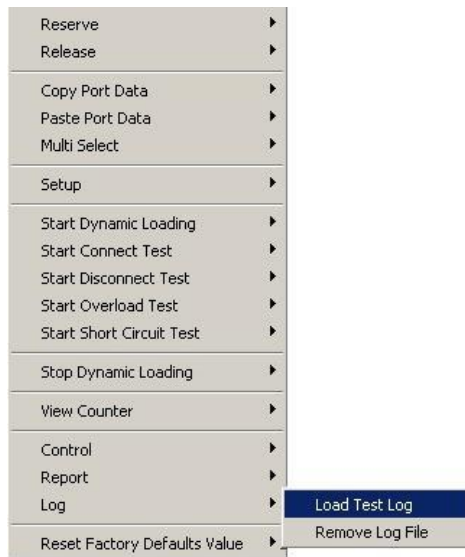
Select port and the new location of the new Firmware and press **Download for Port** to update Firmware or FPGA. Or check the box of the card name and press **Download for Chassis** to update Firmware or FPGA.

6.9.3 Log window



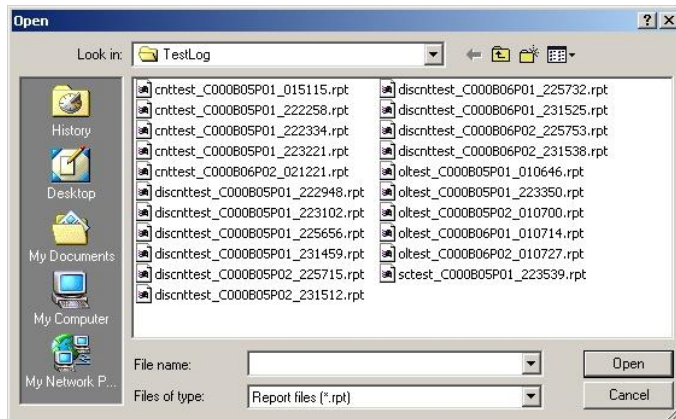
Log report includes the detailed operation log: date, time and log event.

6.10 Log



6.10.1 Load Test Log

Look in the folders to open an existed test report log in .rpt format.



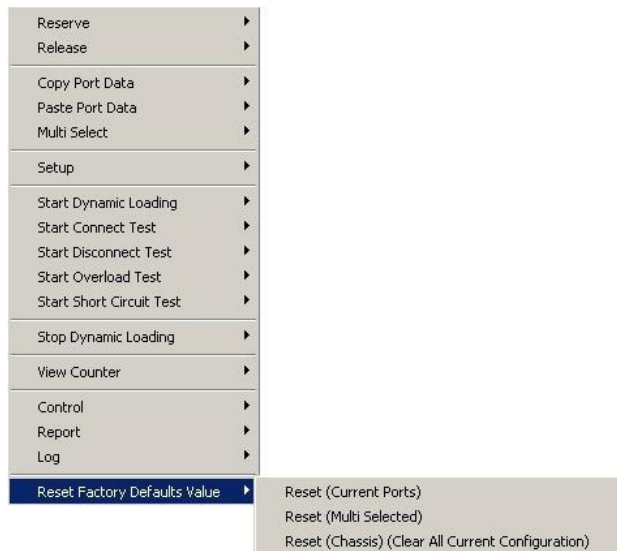
6.10.2 Remove Log File

A message window will pop up to confirm to remove all log files after clicking **Remove**

Log File from popup menu. Click **Yes** to proceed or **No** to cancel.



6.11 Reset Factory Default Value



It is applicable to reset any factory default values by clicking **Reset Factory Default Value**. A Reset finish dialogue will appear after it is complete. Click **OK** button to close the dialogue.



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